



Drafts

BRS: and (direct near2 current)

Pending

Active

- L1: (431) LINC
- L2: (7) L1 and "power transmitter"
- L3: (1) 2 and "DC/DC"
- L4: (7) L1 and "power transmitter"
- L5: (5) L4 and bias
- L6: (3) L4 and bias.clm.
- L7: (85258) "455"/\$.ccls.
- L8: (42) L7 and LINC
- L9: (36) L8 and (DSP or digital)
- L10: (4) L9 and (direct near2 current)
- L11: (3) L9 and (direct near2 current).clm.
- L12: (1) L9 and (direct near2 current).clm.
- L13: (396) 455/114.3 455/127.1 455/177.1 330/2 330/285
- L14: (2) 13 and LINC.clm.
- L15: (1) 14 and (direct near2 current).clm.

Failed

Saved

- S8: (33) S7 and (DSP or digital)
- S2: (395) LINC
- S5: (5) 3 and bias
- S18: (0) S17 and L.DF

US 2004/0185805 A1

(1) United States
(12) Patent Application Publication (20) Pub. No.: US 2004/0185805 A1
Kim et al. (10) Pub. Date: Sep. 23, 2004

(54) LINC POWER TRANSMITTER (59) Foreign Application Priority Data
Feb. 23, 2003 (KR) 2003-10077

(73) Inventors: Bumman Kim, Pohang-city (KR);
Yongsoo Yang, Incheon-city, CA
(US); Sang Yoon Nam, Pohang-city
(KR); Joo Hyuk Yi, Pohang-city (KR);
Seung Woo Kim, Pohang-city (KR)

(51) Int. Cl.⁷ H04B 1/04
(52) U.S. Cl. 455/114.3

(57) ABSTRACT
A LINC power transmitter with a power amplifier (LINC) power transmitter is provided. The LINC power transmitter includes a digital signal processing unit which converts the LINC power transmitter, a frequency modulation unit which modulates or converts a digital signal output from the digital signal processing unit into a radio-frequency (RF) signal, a signal amplifier unit which amplifies the RF signal output from the frequency modulation unit using a gain amplifier and a power amplification module, and a direct conversion circuit (DC/DC) conversion unit which converts the RF signal into a base band signal and a radio-frequency (RF) signal. Thus, the DC/DC conversion unit converts a base band signal and a radio-frequency (RF) signal into a base band signal, and the power amplification module amplifies the base band signal.

(75) Assignee: POSTECH FUNDATION, Pohang-city (KR)

(21) Appl. No.: 10/767,172
(22) Filed: Jan. 30, 2004

BRS form IS&R form Image Text HTML

	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current Ret	Inventor	S
1	<input type="checkbox"/>	<input type="checkbox"/>	US 20040185805 A1	20040923	10	LINC power transmitter	455/114.3	455/91	Kim, Bumman et al.	<input checked="" type="checkbox"/>

--	--	--	--	--	--	--	--	--	--	--

Hits Details HTML

Ready

NUM

5 BRS: and (direct near2 current)

Ⓢ Pending

 Active

- L1: (431) LINC
- L2: (7) L1 and "power transmitter"
- L3: (1) 2 and "DC/DC"
- L4: (7) L1 and "power transmitter"
- L5: (5) L4 and bias
- L6: (3) L4 and bias.clm.
- L7: (85258) "455"/\$.ccls.
- L8: (42) L7 and LINC
- L9: (36) L8 and (DSP or digital)
- L10: (4) L9 and (direct near2 current)
- L11: (3) L9 and (direct near2 current).clm.
- L12: (1) L9 and (direct near2 current).clm.

Failed

 Saved

- S8: (33) S7 and (DSP or digital)
- S2: (395) LINC
- S5: (5) 3 and bias
- S18: (0) S17 and LPF
- S12: (7) LINC and "power transmitter"
- S1: (0) linear near3 amplification near3 nonlinear near3 component
- S9: (1) S8 and "DC/DC"

(19) United States
(12) Patent Application Publication
Kim et al.

(11) Pub. No.: US 2004/0185805 A1
(13) Pub. Date: Sep. 23, 2004

Q54) LINE POWER TRANSMITTER

(30) Foreign Application Priority Data

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0%

Fre. 21, 2003 (U.K.) www.birds.org.uk/birds/2003-10071

(75) Invention. Benjamin Kim, Peking-city (CR).
Yongqun Yang, Newbury Park, CA
(US). Liangyou You, Peking-city
(CR); Jue Hsueh Yi, Peking-city (CN).
Songmei Wu, Peking-city (CR).

Publication Classification	
(1) Int. Cl. ⁸	B24B 1/04
(2) U.S. Cl.	453/343, 453/41

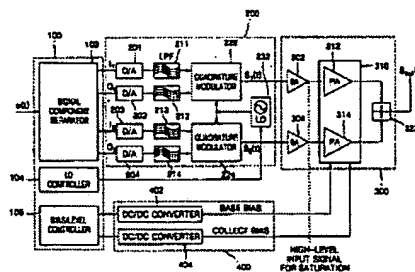
Correspondence Address:
EDITHWELL, FINE, ERNST & MANBECK,
P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005 (U.S.)

07 **ABSTRACT**
A linear amplification with nonlinear compression (LINC) power transmission is provided. The LINC power transmission includes a power amplifier and a frequency modulator. The LINC power transmission is a frequency modulation sub-modulation or converts a digital signal output from the digital signal processing unit into a radio-frequency (RF) signal, a signal amplification unit which amplifies the RF signal output from the frequency modulation sub-modulation by using a power amplifier and a power synchronization module, and a direct current (DC) conversion unit (DC) conversion unit which receives the output of the power amplifier and the output of the DC-DC conversion unit and outputs a base wave and a power wave. The power amplification module and the power synchronization module operate in a synchronous manner.

(G3) Assign: POSTECH FOUNDATION, Korea

1000

Q11 Appl. No.: 16743172



 BRS form
  IS&R form
  Image
  Text
  HTML

	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current	Ret	Inventor	S
1			US 20040185805 A1	20040923	10	LINC power transmitter	455/114.3	455/91		Kim, Bunman et al.	

EAST - [10767172.wsp:1]

File View Edit Tools Window Help

☐ Drafts

- ☒ BRS: and (direct near2 current)

☐ Pending

☒ Active

- ☒ L1: (431) LINC
- ☒ L2: (7) L1 and "power transmitter"
- ☒ L3: (1) 2 and "DC/DC"
- ☒ L4: (7) L1 and "power transmitter"
- ☒ L5: (5) L4 and bias
- ☒ L6: (3) L4 and bias.cln.

☒ Failed

☒ Saved

- ☒ S8: (33) S7 and (DSP or digital)
- ☒ S2: (395) LINC
- ☒ S5: (5) 3 and bias
- ☒ S18: (0) S17 and LPF
- ☒ S12: (7) LINC and "power transmitter"
- ☒ S1: (0) linear near3 amplication near3 nonlinear near3 component
- ☒ S9: (1) S8 and "DC/DC"

Search List Browse Queue Clear

DBs: US-PGPUB ☒ Plurals

Default operator: OR ☒ Highlight all hit terms initially

L4 and bias.cln.

BRS form IS&R form Image Text HTML

	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current	Ret	Inventor	S
1	<input type="checkbox"/>	<input type="checkbox"/>	US 20060014509 A1	20060119	18	Adaptive-biased mixer	455/255	455/230		Xu, Zhiwei et al.	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	US 20050181746 A1	20050818	10	Methods and systems for signal amplification through e	455/91	455/114.2; 455/114.3		Wight, James Stuart	<input checked="" type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	US 20040185805 A1	20040923	10	LINC power transmitter	455/114.3	455/91		Kin, Bunman et al.	<input checked="" type="checkbox"/>

Hits Details HTML

Ready NUM